

### **DETAILED ACTION**

1. This action is issued in response to applicant filed request for continued examination (RCE) on 12/23/2007.
2. Claims 1, 4, 17, 20, 33, and 36 have been amended. No claims were added. Claims 3, 5, 19, 21, 35, and 37 were canceled.
3. Claims 1 – 2, 4, 6 – 18, 20, 22 – 34, 36, and 38 – 48 are allowed.

### ***Continued Examination Under 37 CFR 1.114***

4. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/11/2006 has been entered.

### ***Response to Arguments***

5. Applicant's arguments, filed 12/23/2007, with respect to claims 1 – 2, 4, 6 – 18, 20, 22 – 34, 36, and 38 – 48 have been fully considered and are persuasive. The 35 USC 103(a) rejection of claims 1 – 2, 4, 6 – 18, 20, 22 – 34, 36, and 38 – 48 has been withdrawn.

6. The Declaration under 37 CFR 1.132 filed 12/23/2007 is sufficient to overcome the rejection of claims 1 – 2, 4, 6 – 18, 20, 22 – 34, 36, and 38 – 48 based upon 35 USC 103(a).

### ***EXAMINER'S AMENDMENT***

7. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

8. Authorization for this examiner's amendment was given in a telephone interview with Suzanne Erez on 03/27/2008.

9. The application has been amended as follows:

#### **In the claim:**

Please amend claim 33 as follows:

33. A computer software product for use in a data storage system including primary and secondary storage subsystems, which include respective first and second control units and respective first and second non-volatile storage media, the product comprising a non-volatile storage medium in which program instructions are stored, which instructions, ~~when read by the first and second control units,~~ cause the first

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control unit to receive data from a host processor for writing to a specified location, and to store the data in the specified location on the first non-volatile storage media while copying the data to the second storage subsystem, and cause the second control unit to store the data in the specified location on the second non-volatile storage media so as to create a mirror on the secondary storage subsystem of the data received by the primary storage subsystem,

wherein the instructions further cause the first control unit to maintain a record of locations to which data are expected to be written on the primary storage subsystem by the host processor, as indicated by a predetermined prediction algorithm based on the locations to which the data have already been written, and upon receiving the data from the host processor, to update the record using the prediction algorithm so that the record includes both the specified location and one or more further locations that have not yet been specified by the host processor if the specified location is not included in the record, and to output an acknowledgement to the host processor to indicate that the data have been stored in the data storage system after receiving the data and after updating the record if the specified location was not included in the record prior to updating the record, and

wherein upon recovery of the system from a failure of the primary storage subsystem, the instructions cause the second control unit to convey, responsively to the record, a portion of the data from the second non-volatile storage media to the primary storage subsystem for storage on the first non-volatile storage media.

***REASONS FOR ALLOWANCE***

7. Claims 1 – 2, 4, 6 – 18, 20, 22 – 34, 36, and 38 – 48 are allowable in light of the applicant's arguments and in light of the prior art made of record.

***Reason for Indicating Allowable Subject Matter***

8. The following is an examiner's statement of reasons for allowance: Upon searching a variety of databases, the examiner respectfully submits that "if the specified location is not included in the record, updating the record using the prediction algorithm so that the record includes both the specified location and one or more further locations that have not yet been specified by the host processor" in conjunction with all other limitations of the dependent and independent claims are not taught nor suggested by the prior art of record. Therefore, all pending claims 1 – 2, 4, 6 – 18, 20, 22 – 34, 36, and 38 – 48 are hereby allowed.

9. Any comments considered necessary by applicant must be submitted no later than the payment of the issues fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Points Of Contact***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GIOVANNA COLAN whose telephone number is (571)272-2752. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Giovanna Colan  
Examiner  
Art Unit 2162  
March 27, 2008

/Jean M Corrielus/  
Primary Examiner, Art Unit 2162